

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Department of Physics

Physics 8.01x

Fall Term 2001

WHAT IS 8.01X?

Physics I, 8.01X, covers the classical Newtownian mechanics syllabus of all the MIT first term physics subjects along with a set of **take-home experiments**. Topics covered include estimation, kinematics, force, Newton's Laws, energy, work, heat, momentum, collisions, torque, angular momentum, properties of materials, kinetic theory, introduction to the atom, and special relativity. Each student in partnership with a classmate constructs the experiments which illustrate the basic principles of mechanics. The parts for the experiments and a detailed write-up are provided. Students are encouraged to buy a special 8.01X toolkit for \$25. The student obtains experience in electronics, mechanical assembly, and data taking. In addition, the student is taught the basic principles of data analysis and presentation. There are **weekly problem sets** online using **Cybertutor**, as well as problem sets requiring written solutions. **Both 8.01X and 8.01 are equivalent preparations for all future physics courses.** Students who enroll in 8.01X are not required to enroll in 8.02X but usually choose to. There will be **three in-class quizzes and a final exam.**

For further information please contact Prof. Kate Scholberg at
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or visit the web page at

<http://web.mit.edu/8.01x/www>.